

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of claims:

1. (currently amended) A system for applying a coating to at least one an insulative component, the system comprising:
 - a vacuum chamber;
 - at least one physical vapor deposition station arranged to apply a coating material to the at least one insulative component;
 - at least one cooling station arranged to actively cool the at least one insulative component and drive the temperature of the at least one insulative component substantially down; and
 - a component handler configured ~~designed~~ to move the at least one insulative component within the vacuum chamber and programmed to automatically bring the at least one insulative component ~~components~~ proximate the at least one a physical vapor deposition station until the at least one insulative component is ~~components are~~ partially coated to a predetermined thickness and then proximate the at least one a cooling station before thermal damage can occur to the at least one insulative component ~~components~~ and until the at least one insulative component is ~~they are~~ sufficiently cooled and to then switch between the at least one physical vapor deposition station ~~stations~~ and the at least one cooling station ~~stations~~ until the desired coating thickness is obtained.

2. (currently amended) The system of claim 1 in which there are a plurality of physical vapor deposition stations and cooling stations ~~arranged circumferentially~~ with cooling stations positioned between physical vapor deposition stations.

3. (currently amended) The system of claim ~~1~~ 2 in which ~~there are a~~ the plurality of physical vapor deposition stations and cooling stations are arranged linearly with cooling stations positioned between physical vapor deposition stations.

4. (currently amended) The system of claim 1 in which the cooling station includes at least one a heat sink in a subchamber and means for filling the subchamber with a high conductivity gas.

5. (currently amended) The system of claim 4 in which the at least one insulative component includes ~~components include~~ a cavity and the heat sink is shaped to fit within the cavity.

6. (original) The system of claim 1 in which the programming of the component handler includes logic which limits the partial coating time to less than one minute and the cooling time to less than one minute.

7. (currently amended) The system of claim 1 in which the time span of partial coating ~~cooling~~ is the same as or approximately the time span of cooling.

8. (currently amended) The system of claim ~~1~~ 2 in which the component ~~components~~ handler includes trays for holding a plurality of components.
9. (original) The system of claim 8 in which each cooling station includes one heat sink for each tray.
10. (original) The system of claim 9 in which each cooling station further includes a subchamber containing all the heat sinks and means for filling the subchamber with a high conductivity gas.
11. (new) The system of claim 2 in which the plurality of physical vapor deposition stations and cooling stations are arranged circumferentially with cooling stations positioned between physical vapor deposition stations.
12. (new) The system of claim 1 in which the component handler includes at least one tray for holding a plurality of components.
13. (new) A system for applying a coating to at least one insulative component, the system comprising:
- a vacuum chamber;
 - at least one physical vapor deposition station arranged to apply a coating material to the at least one insulative component, the at least one insulative component including a cavity;

at least one cooling station arranged to actively cool the at least one insulative component and drive the temperature of the at least one insulative component substantially down, said cooling station including at least one heat sink shaped to fit within the cavity of the at least one component; and

a component handler configured to move the at least one insulative component within the vacuum chamber and programmed to automatically bring the at least one insulative component proximate the at least one physical vapor deposition station until the at least one insulative component is partially coated to a predetermined thickness and then proximate the at least one cooling station before thermal damage can occur to the at least one insulative component and until the at least one insulative component is sufficiently cooled and to then switch between the at least one physical vapor deposition station and the at least one cooling station until the desired coating thickness is obtained.

14. (new) A system for applying a coating to at least one insulative component, the system comprising:

a vacuum chamber;

at least one physical vapor deposition station arranged to apply a coating material to the at least one insulative component, the at least one insulative component including a cavity;

at least one cooling station arranged to actively cool the at least one insulative component and drive the temperature of the at least one insulative component substantially down, said cooling station including a heat sink in a subchamber and means for filling the subchamber with a high conductivity gas, the heat sink shaped to fit within

the cavity of the at least one component; and

a component handler configured to move the at least one insulative component within the vacuum chamber and programmed to automatically bring the at least one insulative component proximate the at least one physical vapor deposition station until the at least one insulative component is partially coated to a predetermined thickness and then proximate the at least one cooling station before thermal damage can occur to the at least one insulative component and until the at least one insulative component is sufficiently cooled and to then switch between the at least one physical vapor deposition station and the at least one cooling station until the desired coating thickness is obtained.

15. (new) A system for applying a coating a plurality of insulative components, the system comprising:

a vacuum chamber;

a plurality of physical vapor deposition stations each arranged to apply a coating material to the insulative components;

a plurality of cooling stations separated from the plurality of physical vapor deposition stations, said cooling stations each arranged to actively cool the insulative components and drive the temperature of the insulative components substantially down, said cooling stations positioned between physical vapor deposition stations; and

a component handler configured to move the insulative components within the vacuum chamber and programmed to automatically bring the insulative components proximate one of the plurality of physical vapor deposition stations until the insulative

components are partially coated to a predetermined thickness and then proximate one of the plurality of cooling stations before thermal damage can occur to the insulative components and until they are sufficiently cooled and to then switch between one of the plurality of physical vapor deposition stations and one of the plurality of cooling stations until the desired coating thickness is obtained.